

ABSTRACT OF THE DISCLOSURE

An electrode for a light-emitting semiconductor device includes a light-permeable electrode formed to come into contact with the surface of the semiconductor, and a wire-bonding electrode that is in electrical contact with the light-permeable electrode and is formed to come into partial contact with the surface of the semiconductor with at least a region in contact with the semiconductor having a higher contact resistance per unit area with respect to the semiconductor than a region of the light-permeable electrode in contact with the semiconductor. This device electrode is formed by forming a wire-bonding electrode on a portion of the surface of a p-type GaN-base compound semiconductor, forming on the surface of the semiconductor a first layer that is of at least one member selected from the group consisting of Au, Pt and Pd and is formed to overlay the upper surface of the wire-bonding electrode at a portion at which the wire-bonding electrode is located, forming on the first layer a second layer that is of at least one metal selected from the group consisting of Ni, Ti, Sn, Cr, Co, Zn, Cu, Mg and In, and forming a light-permeable electrode by heat-treating the first and second layers in an atmosphere that contains oxygen.